Amendment to the Claims

This listing of Claims will replace all prior versions and listing of the Claims in the application:

Listing of the Claims

1. (Previously Presented) An audio system for use in a vehicle, comprising:

a plurality of audio sources connected to an amplifier, the amplifier comprising a respective balance setting for each audio source and configured to provide a respective amplified audio signal to each of a plurality of speakers, where the audio sources are operable to generate a plurality of audio output signals that are supplied to the amplifier; and

a control unit connected with the amplifier, and configured to adjust the respective amplified audio signals for each speaker based on each of the respective audio sources that generates the audio output signal, where the control unit includes a user interface for independently setting each respective balance setting of each respective audio source, where the control unit is further configured to adjust the balance settings based upon a user selected audio source.

2. (Previously Presented) The audio system of claim 1 where the balance setting is configured to output an acoustic driver information message receivable from the navigation system to a speaker positioned near a driver of the vehicle.

3. (Previously Presented) The audio system of claim 2 where the amplifier is configured to mute audio output signals from other audio sources from the speaker positioned nearest the driver in response to receipt of the acoustic driver information message receivable from the navigation system being played on the speaker positioned nearest the driver.

4. (Previously Presented) The audio system of claim 2 where the amplifier is configured to generate audio output signals from other audio sources uninterrupted by the acoustic driver information message receivable from the navigation system in at least one speaker not positioned nearest the driver.

5. (Previously Presented) The audio system of claim 4 where the amplifier is configured to mute the acoustic driver information message receivable from the navigation system from the audio output signals sent to the speakers not positioned nearest the driver.

6. (Previously Presented) The audio system of claim 1 where the control unit includes an audio manager module operable to control the balance setting of the amplifier connected to the speakers based on the respective balance setting for each audio source.

7. (Previously Presented) The audio system of claim 1 where the control unit includes a means for adjustment operable to allow a user to independently adjust the balance setting of each of the respective audio sources.

8. (Previously Presented) The audio system of claim 1 where the control unit includes a user interface module operable to receive a user adjustment of the respective balance setting of the user selected audio source for each respective audio source.

9. (Previously Presented) The audio system of claim 8 where the user interface module is configured to generate a balance setting graphical user interface on a touch-screen.

10. (Previously Presented) The audio system of claim 1 where the control unit is configured to store the respective balance setting for each respective audio source.

11. (Previously Presented) The audio system of claim 1 where the user selected audio source comprises at least one audio source from a group of audio sources including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player, and a text-to-speech system.

12. (Previously Presented) A computer program product for use with an audio system in a vehicle, comprising:

computer readable program code to control a plurality of audio sources, where each respective audio source includes an audio output signal; and

computer readable program code to receive a respective audio source balance setting for a plurality of speakers for each respective audio source from a user interface.

13. (Previously Presented) The computer program product of claim 12, further comprising computer readable program code to audibly reproduce the audio output signals on the speakers based upon the respective balance setting of each of the audio sources.

14. (Original) The computer program product of claim 12 where at least one audio output signal comprises an acoustic driver information message generated from a respective audio source.

15. (Previously Presented) The computer program product of claim 14 where at least one of the plurality of audio sources comprises a navigation system including a navigation system balance setting.

16. (Previously Presented) The computer program product of claim 14, further comprising:

computer readable program code to generate the acoustic driver information message receivable from a navigation system in a speaker nearest a driver of the vehicle based on the navigation system balance setting; and

computer readable program code to reduce the audio output signals from audio sources other than the navigation system in the speaker nearest the driver in response to reproduction of the acoustic driver information message.

17. (Canceled)

18. (Previously Presented) The computer program product of claim 15 where the navigation system balance setting mutes audio output signals from audio sources other than the navigation system in the speaker nearest the driver of the vehicle.

19. (Original) The computer program product of claim 12 where the plurality of speakers comprise a front and rear set of loudspeakers.

20. (Previously Presented) The computer program product of claim 12, further comprising computer readable storage medium including a program code to generate a graphical user interface on a display to display the respective audio source balance setting for each respective audio source.

21. (Previously Presented) The computer program product of claim 20 where the audio sources include at least one of a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player, and a text-to-speech system.

22. (Previously Presented) The computer program product of claim 12, further comprising computer readable storage medium including a program code to set the balance setting for each audio source based on a respective passenger category.

23. (Previously Presented) The computer program product of claim 22 where the passenger category includes at least one of the group of a driver category, a co-driver category, at least one child category, or at least one adult passenger category.

24. (Previously Presented) An audio system for a vehicle, comprising:

a plurality of audio sources configured to generate a plurality of audio output signals;

an amplifier connected to the audio sources, and configured to receive the audio output signals generated by the audio sources;

a plurality of speakers connected to the amplifier; and

a head unit connected to the amplifier operable to control a balance setting of the speakers for each respective audio source configured to generate the audio output signals, where the head unit is operable to generate a user interface configured to receive an audio source balance setting for each respective audio source, and further configured to store each respective audio source balance setting for each respective audio source.

25. (Previously Presented) The audio system of claim 24 where the amplifier includes a balance setting circuit and the amplifier is configured to be controlled by the head unit.

26. (Canceled)

27. (Previously Presented) The audio system of claim 24 where the user interface further includes a touch-screen display configured to receive an audio source balance setting for each respective audio source.

28. (Previously Presented) The audio system of claim 24 where the head unit includes an audio manager module operable to control the amplifier based upon the audio source balance setting for each respective audio source.

29. (Previously Presented) The audio system of claim 24 where one audio source comprises a navigation system configured to generate an acoustic driver information message, and the audio source balance setting associated with the navigation system is configured to set the balance setting of the speakers to audibly reproduce the acoustic driver information message only in a respective speaker positioned near a driver of the vehicle, and the amplifier is further configured to reduce the output of other audio sources in the respective speaker positioned nearest the driver of the vehicle in response to generation of the acoustic driver information message.

30. (Previously Presented) The audio system of claim 29 where another audio source continues to audibly reproduce in a predetermined number of other speakers uninterrupted by the acoustic driver information message.

31. (Previously Presented) The audio system of claim 24 where at least one audio source is selected from a group of audio sources including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player, and a text-to-speech system.

32. (Previously Presented) A method of controlling balance settings for a plurality of audio sources in an audio system for a vehicle, comprising:

generating a plurality of audio output signals from a plurality of audio sources;

transmitting the audio output signals from the audio sources to an amplifier;

receiving selected balance settings for selected audio sources with a head unit connected to the amplifier;

storing the selected balance settings received from the head unit as the respective audio source balance settings for the selected audio sources; and

reproducing an audio output signal on at least two speakers based upon a stored selected balance setting for one of the selected audio sources.

33. (Previously Presented) The method of claim 32 where the head unit includes a graphical user interface configured to receive a selected balance setting of a selected audio source from an occupant of the vehicle, where each audio source can be associated with a respective audio source balance setting.

34. (Previously Presented) The method of claim 33 where the graphical user interface includes a vertical and horizontal scroll bar for adjusting the balance setting.

35. (Previously Presented) The method of claim 33 where a touch-screen display in the vehicle is configured to generate the graphical user interface.

36. (Original) The method of claim 32 where one of the audio output signals comprises an acoustic driver information message generated by a navigation system.

37. (Previously Presented) The method of claim 36 where an audio source balance setting associated with the navigation system generates the acoustic driver information message on a speaker chosen by the driver.

38. (Previously Presented) The method of claim 32 where at least one audio source is selected from a group of audio sources including a navigation system, a tuner, a remote terminal, a compact disc player, a digital video disc player, an MP3 player, a radio data service tuner, a television, a satellite radio, an Internet radio, a cassette player and a text-to-speech system.

39. (Previously Presented) An audio system for use in a vehicle comprising:

a plurality of audio sources connected to an amplifier operably coupled to a plurality of speakers;

a control unit connected to the amplifier;

a passenger category selection module located on the control unit and configured to receive a user selected passenger category from a plurality of passenger categories, and each passenger category includes a respective balance setting for each audio source; and

a user interface module located on the control unit, and configured to adjust a balance setting of the plurality of speakers for the selected passenger category based on a respective audio source that generates an audio output signal and the user selected passenger category.

40. (Previously Presented) The audio system of claim 39 further comprising an audio manager module configured to control the amplifier to audibly reproduce the audio output

signal in a predetermined number of speakers based upon the balance setting for each of the audio sources.

41. (Previously Presented) The audio system of claim 39 where the passenger category selection module is operable to generate a balance setting graphical user interface configured to receive a balance setting for each respective audio source for each respective passenger category.

42. (Previously Presented) The audio system of claim 39 where the passenger categories include a driver category, a co-driver category, a backseat passenger category and a children category.

43. (Previously Presented) A method of controlling balance settings in an audio system for a vehicle, comprising:

receiving a selected passenger category selected from a plurality of passenger categories, where the passenger category includes a respective balance setting for each of a plurality of audio sources;

receiving an adjustment for the balance setting of at least one audio source for the selected passenger category; and

reproducing audio output signals based on the balance setting for each audio source.

44. (Previously Presented) The method of claim 43 where the audio system comprises a passenger category selection module located on a control unit, the method further comprising

generating a graphical user interface on the passenger category selection module to display the plurality of passenger categories and to receive the selected passenger category.

45. (Previously Presented) The method of claim 43 where the plurality of passenger categories comprises at least one of a group of passenger categories including a driver category, a co-driver category, a backseat passenger category and a children category.

46. (Previously Presented) In a vehicle navigation system having a graphical user interface including a display and selection device, a method of providing and selecting from a stored menu on the display and selection device, comprising:

retrieving a set of menu entries associated with the stored menu, where each of the menu entries represents at least one balance setting associated with each one of a plurality of audio sources for a selected passenger category;

displaying at least one of the balance settings associated with each audio source for the selected passenger category on the display and selection device;

receiving a menu entry selection signal by pointing at a selected menu entry associated with the balance setting from the set of menu entries; and

in response to the menu entry selection signal, adjusting the balance setting associated with the audio source as indicated by the menu entry selection signal.

47. (Canceled)

48. (Canceled)

49. (Previously Presented) The method of claim 46 further comprising reproducing audio output signals on a plurality of speakers based on the respective balance setting provided for each audio source.

50. (Previously Submitted) The method of claim 46 further comprising:

displaying a plurality of passenger categories;

receiving a menu entry selection signal indicative of the selection of one of the displayed passenger categories;

setting the selected passenger category to the one of the plurality of passenger categories indicated by the menu entry selection signal.

51. (Previously Submitted) The method of claim 46 where the display and selection device comprise a touch screen display.

52. (Previously Submitted) The method of claim 51 further comprises:

generating a horizontal scroll bar on the touch screen display;

generating a vertical scroll bar on the touch screen display;

receiving a location of the respective horizontal and vertical scroll bars on the touch screen displays;

adjusting the balance setting of each audio source based on the received location of the horizontal and vertical scroll bars.

53. (Previously Submitted) The method of claim 46, where the selected passenger category is selected from a plurality of passenger categories; and the plurality of passenger categories includes a driver category, a co-driver category, a backseat passenger category, and a child category.

54. (Previously Submitted) The computer program product of claim 15, further comprising:

computer readable storage medium including a program code to generate an indication of the acoustic driver information message;

computer readable storage medium including a program code to mute audio output signals from audio sources other than the navigation system in the speaker nearest the driver of the vehicle based on the indication of the generation of the acoustic driver information message.

55. (Previously Submitted) The computer program product of claim 22, further comprising:

computer readable storage medium including a program code to select a selected passenger category from a plurality of passenger categories.

56. (Cancelled).